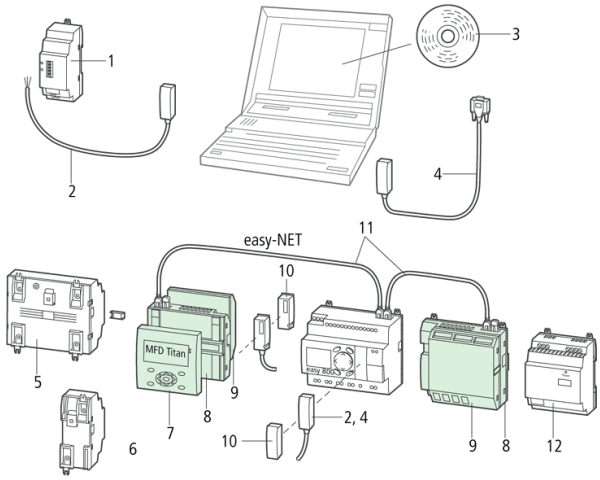
Type: **MFD–TAP13–PT–B**
Article No.: **106046**
Sales text **E/A MFD 24VDC,Trans., 2E x PT100, 1QA**

IP20, springloaded terminals

Ordering information			
Description			24 V DC for MFD–CP8.. (from device version 08), temperature range can be set.
Inputs			
Digital			6
of which can be used as analog			2
Upper value of setting range			2
Outputs			
Transistor			4
Analog			1
Temperature range			–200...+200 °C 0...+850 °C

Notes concerning the product group



Accessories	Page
1 Ethernet gateway	→ 101520
2 Connection cable	→ 280887
3 Programming software	→ 266040
4 PC programming cable	→ 256277
5 I/O expansion	→ 212314
6 Output expansion, bus module, coupling module	→ 212315
7 Display/keypad	→ 265251
8 Power supply unit/CPU	→ 265253
9 I/O module	→ 265254
10 Memory card	→ 256279
11 easy–NET	→ 256283
12 Switched–mode power supply unit	→ 212319

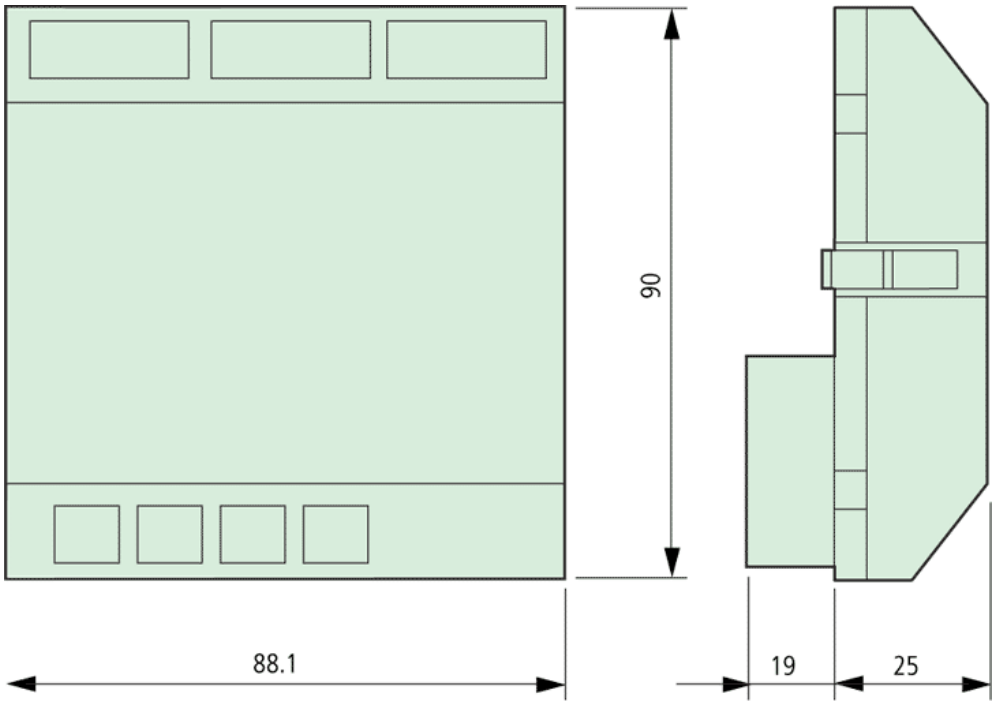
General			
Standards			EN 61000–6–1/–2/–3/–4, IEC 60068–2–6, IEC 60068–2–27
Weight		kg	0,14
Mounting			Fitted into the power supply unit.
Terminal capacities			
Solid		mm^2	0.24 (AWG 24 – 12)
Flexible with ferrule		mm^2	0.22.5 (AWG 24 – 12)
Standard screwdriver		mm	3.5 × 0.6
Climatic environmental conditions			
Operating ambient temperature		°C	–25 to 55, cold as per IEC 60068–2–1, heat as per IEC 60068–2–2
Condensation			Take appropriate measures to prevent condensation
Storage		°C	... 40...+70
Relative humidity, non–condensing (IEC/EN 60068–2–30)		%	5...95
Air pressure (operation)		hPa	795...1080
Ambient conditions, mechanical			
Pollution degree			2

Degree of protection IEC/EN 60529			IP 20
Vibrations (IEC/EN 60068–2–6)			
Constant amplitude 0.15 mm		Hz	10...57
Constant acceleration 2 g		Hz	57...150
Mechanical shock resistance (IEC/EN 60068–2–27) semi–sinusoidal 15 g/11 ms		Impacts	18
Drop to IEC/EN 60068–2–31	Drop height	mm	50
Free fall, packaged (IEC/EN 60068–2–32)		m	1
Mounting position			horizontal, vertical
Electromagnetic compatibility (EMC)			
Electrostatic discharge (IEC/EN 61000–4–2, Level 3, ESD)			
Air discharge		kV	8
Contact discharge		kV	6
Electromagnetic fields (IEC/EN 61000–4–3, RFI)		V/m	10
Radio interference suppression (EN 55011)			EN 55011 Class B, EN 55022 Class B
Burst pulses (IEC/EN 61000–4–4, level 3)			
Supply cables		kV	2
Signal lines		kV	2
High–energy pulses (surge) (IEC/EN 61000–4–5)		kV	2 (supply cables, symmetrical)
High–energy pulses (surge) (IEC/EN 61000–4–5, level 2)		kV	0.5 (supply cables, symmetrical)
Immunity to line–conducted interference to (IEC/EN 61000–4–6)		V	10
Insulation resistance			
Clearance in air and creepage distances			EN 50178, UL 508, CSA C22.2, no. 142
Insulation resistance			EN 50178
Digital inputs 24 V DC			
Number			6
Inputs can be used as analog inputs			2 (I11, I12)
Potential isolation			
From power supply			No
Between digital inputs			No
From the outputs			Yes

for Program code			Yes
Rated operational voltage	*U*e	V DC	24
On 0 signal	*U*e	V DC	< 5.0 (I1 – I4) < 8.0 (I11, I12)
On 1 signal	*U*e	V DC	>15.0 (I1 – I4) > 8.0 (I11, I12)
Input current on 1 signal			
I11, I12		mA	2.2 (at 24 V DC)
Delay time from 0 to 1			
Debounce ON		ms	20
Debounce OFF		ms	Normally 0.1 (I1 – I4), Normally 0.25 (I11 – I12)
Delay time from 1 to 0			
Debounce ON		ms	20
Debounce OFF		ms	Normally 0.1 (I1 – I4), normally 0.2 (I11, I12)
Cable length (unscreened)		m	100
Frequency counter			
Quantity			4 (I1, I2, I3, I4)
Counter frequency		kHz	< 3
Pulse shape			Square
Incremental counter			
Quantity			2 (I1 + I2, I3 + I4)
Counter frequency		kHz	3
Pulse shape			Square
Signal offset			90°
Rapid counter inputs			
Number			4 (I1, I2, I3, I4)
Counter frequency		kHz	< 3
Pulse shape			Square
Cable length, screened		m	< 20
Analog inputs			
Potential isolation			
From power supply			No
From the digital inputs			No
From the outputs			Yes
for Program code			Yes
Input type			DC voltage
Signal range		V DC	0 – 10
Resolution, analog		V	0,01
Resolution, digital		V	0,01

Resolution		Bit	10 (value 0 – 1023)
Input impedance		k	11,2
Accuracy of actual value			
two MFD devices		%	± 3
Within a single device		%	± 2
Conversion time, analog/digital		ms	Each CPU cycle
Input current		mA	< 1
Cable length screened		m	< 30
Analog outputs			
Number			1
Potential isolation			
From the digital outputs			Yes
for Program code			Yes
Output type			DC voltage
Signal range		V DC	0 – 10
Max. output current		A	0,01
Load resistance			1 k
Overload and short–circuit protection			Yes
Resolution, analog		V DC	0,01
Resolution, digital		Bit	12 (value 0 – 4095) at QA01, MD
Recovery time		µs	100
Accuracy			
–25 °C – 55 °C		%	2
25°C		%	1
Conversion time			Each CPU cycle

Dimensions



Moeller GmbH, Hein–Moeller–Str. 7–11, D–53115 Bonn
E–Mail: catalog@moeller.net, Internet: www.moeller.net, http://catalog.moeller.net
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